

Product datasheet for **RG238812**

CAMK2B (NM_001293170) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2B (NM_001293170) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CAMK2B
Synonyms:	CAM2; CAMK2; CAMKB; CaMKIIbeta; MRD54
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG238812 representing NM_001293170.
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGGATCGCC
ATGGCCACCACGGTGACCTGCACCCGCTTCACCGACGAGTACCAGCTCTACGAGGATATTGGCAAGGGG
GCTTTCTCTGTGGTCCGACGCTGTGTCAAGCTCTGCACCGGCCATGAGTATGCAGCCAAGATCATCAAC
ACCAAGAAGCTGTCAGCCAGAGATCACCAGAAGCTGGAGAGAGAGGCTCGGATCTGCCGCCCTTCTGAAG
CATTCCAACATCGTGCCTCTCCACGACAGCATCTCCGAGGAGGGCTTCCACTACCTGGTCTTCGATCTG
GTCACTGGTGGGAGCTCTTTGAAGACATTGTGGCGAGAGAGTACTACAGCGAGGCTGATGCCAGTCAC
TGTATCCAGCAGATCCTGGAGGCCGTTCTCCATTGTACCAAAATGGGGTCTGCCACAGAGACCTCAAG
CCGGAGAACCTGCTTCTGGCCAGCAAGTCAAAGGGGCTGCAGTGAAGCTGGCAGACTTCGGCTAGCT
ATCGAGGTGCAGGGGACCAGCAGGCATGGTTTGGTTTCGCTGGCACACCAGGCTACCTGTCCCCTGAG
GTCCTTCGCAAAGAGGCGTACGGCAAGCCCGTGGACATCTGGGCATGTGGGTGATCCTGTACATCCTG
CTCGTGGGCTACCCACCTTCTGGGACGAGGACCAGCACAAGCTGTACCAGCAGATCAAGCTGGTGCC
TATGACTTCCCCTGCCCTGAGTGGGACACCGTCACTCCTGAAGCCAAAAACCTCATCAACCAGATGCTG
ACCATCAACCCTGCCAAGCGCATCACAGCCATGAGGCCCTGAAGCACCCGTGGGTCTGCCAACGCTCC
ACGGTAGCATCCATGATGCACAGACAGGAGACTGTGGAGTGTCTGAAAAAGTTCAATGCCAGGAGAAAG
CTCAAGGGAGCCATCCTCACCACCATGTGGCCACACGGAATTTCTCAGTGGGACAGACACCACCGCT
CCGGCCACAATGTCCACCGCGCCTCCGGCACCACCATGGGGCTGGTGGAAACAAGCCAAGAGTTTACTC
AACAGAAAGCAGATGGAGTCAAGCCCCAGACGAATAGCACAAAAACAGTGCAGCCGCCACCAGCCCC
AAAGGGACGCTTCTCCTGCCGCCCTGGAGCCTCAAACCACCGTCATCCATAACCCAGTGGACGGGATL
AAGGAGTCTTCTGACAGTGCCAAATACCACCATAGAGGATGAAGACGCTAAAGCCCGAAGCAGGATC
ATTAAGACCACGGAGCAGCTCATCGAGGCCGTCACAACCGTGACTTTGAGGCCTACGCGAAAATCTGT
GACCCAGGGCTGACCTCGTTTGAAGCCTGAAGCACTGGGCAACCTGGTTGAAGGGATGGACTTCCACAGA
TTCTACTTCGAGAACCTGCTGGCCAAGAACAGCAAGCCGATCCACACGACCATCCTGAACCCACACGTG
CACGTCATTGGAGAGGATGCCGCTGCATCGTTACATCCGGCTCACGCAGTACATTGACGGGACGGGC
CGGCCCCGACCCAGCAGTCTGAGGAGACCCGCTGTGGCACCGCCGCGACGGCAAGTGGCAGAACGTC
CACTTCCACTGCTCGGGCGCCTGTGGCCCCGCTGCAG
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAAAC
  
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Protein Sequence:

>Peptide sequence encoded by RG238812
 Blue=ORF Red=Cloning site Green=Tag(s)

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MATTVTCTRFTEYQLYEDIGKAFSVVRRVCLCTGHEHYAAKIINTKKLSARDHQKLEREARICRLK
HSNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIQQILEAVLHCHQMGVVHRDLK
PENLLLASKCKGAVKLADFGLAIEVQGDQQAQWFGAGTPGYLSPEVLRKEAYGKPVDIWACGVILYIL
LVGYPPFWDEQHKLYQIKAGAYDFPSPWDVTPEAKNLINQMLTINPAKRITAEALKHPWVCQRS
TVASMMHRQETVECLKKFNARRKLGAILTTMLATRNFSVGRQTTAPATMSTAASGTTMGLVEQAKSLL
NKKADGVKPTNSTKNSAAATSPKGTLPAALEPQTTVIHNPVDGIKSSDSANTIEDEDAKARKQEI
IKTTEQLIEAVNNGDFEAYAKICDPGLTSFEPEALGNLVEGMDFHRYFENLLAKNSKPIHTTILNPHV
HVIGEDAACIAYIRLTQYIDGQGRPRTSQSEETRVWHRDQKQWQNVHFCGAPVAPLQ
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
  
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Restriction Sites:

SgfI-MluI

ACCN:	NM_001293170
ORF Size:	1626 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
RefSeq:	NM_001293170.1 , NP_001280099.1
RefSeq Size:	2427 bp
RefSeq ORF:	1629 bp
Locus ID:	816
UniProt ID:	Q13554
Cytogenetics:	7p13
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Calcium signaling pathway, ErbB signaling pathway, Glioma, GnRH signaling pathway, Long-term potentiation, Melanogenesis, Neurotrophin signaling pathway, Olfactory transduction, Oocyte meiosis, Wnt signaling pathway
MW:	60.4 kDa
Gene Summary:	The product of this gene belongs to the serine/threonine protein kinase family and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. In mammalian cells, the enzyme is composed of four different chains: alpha, beta, gamma, and delta. The product of this gene is a beta chain. It is possible that distinct isoforms of this chain have different cellular localizations and interact differently with calmodulin. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]